

**ABSTRACT**

[0065] Apparatuses and methods for forming displays are claimed. One embodiment of the invention includes a contact smart card wherein fluidic self assembly is used to build the microelectronic structures on the display such that a contact smart data is transmitted unidirectionally. A contact smart card is inserted directly into a device that transfers data to a display coupled to the smart card. Another embodiment of the invention relates to a contactless smart card in which fluidic self assembly is also used here to build the display. Data is transmitted to an antenna that is embedded in the contactless card in which a plurality of blocks were deposited thereon.

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